

## **AMENDMENTS TO THE CLAIMS:**

This listing will replace all prior versions of claims in the above-referenced application.

### **Listing of Claims:**

1. (Currently Amended) An LCD control unit for driving an LCD panel in an LCD device, said LCD control unit, comprising:

a signal controller for generating a voltage address signal and a polarity control signal;

a voltage generator block, coupled to said signal controller, for internally generating a plurality of (n)  $\gamma$ -voltage levels and a plurality of (m) Vcom-voltage levels, said voltage generator block including a voltage selecting block, wherein output of said voltage generating block is selected by said voltage selecting block from said plurality of (n)  $\gamma$ -voltage levels and said plurality of (m) Vcom-voltage levels according to a value of said voltage address signal input to said voltage generator block;

an impedance converter block, coupled to said signal controller and coupled to and separate from said voltage generator block, that converts input impedances of the  $\gamma$ -voltage levels and the Vcom-voltage levels provided by said voltage generator block and provides as output a specified number of said  $\gamma$ -correction voltages and said Vcom voltage according to a value of an input polarity signal; and

~~a voltage selecting block for selecting a specified number of said  $\gamma$  voltage levels and one of said Vcom voltage levels based on said polarity control signal to output said specified number of  $\gamma$  correction voltages and a Vcom voltage, wherein output of said voltage generating block is selected by said voltage selecting block from said plurality of (n)  $\gamma$  voltage levels and said plurality of (m) Vcom voltage levels according to a value of said voltage address signal, and wherein said voltage selecting block includes an impedance converter, having at least one operational amplifier to receive said  $\gamma$  voltage levels and said Vcom voltage levels, to convert internal impedances of the  $\gamma$  voltage levels and the Vcom voltage levels and generate said specified number of said  $\gamma$  correction voltages and said Vcom voltage according to a value of said polarity signal; and~~

an LCD driver for generating a set of display data signals based on a set of external data signals, wherein said LCD driver receives said specified number of said  $\gamma$ -correction voltages output from said voltage selecting block impedance converter and includes a  $\gamma$ -correction section for correcting voltages of said display data signals based on said specified number of said  $\gamma$ -correction voltages.

2. (Original) The LCD control unit as defined in claim 1, wherein said voltage address signal and said polarity control signal are generated based on a software as time series signals.

3. (Previously Presented) The LCD control unit as defined in claim 1, wherein said voltage generator block includes a resistor string for generating  $n \times L$  voltage levels,  $n$  first decoders for selecting said  $n$   $\gamma$ -voltage levels from said  $n \times L$  voltage levels based on said voltage address signal, and  $m$  second decoders for selecting said  $m$  Vcom-voltage levels from said  $n \times L$  voltage levels based on said voltage address signal, given number  $L$  being an integer.
4. (Original) The LCD control unit as defined in claim 1, wherein said specified number of  $\gamma$ -correction voltages are a pair of  $\gamma$ -correction voltages.
5. (Original) The LCD control unit as defined in claim 4, wherein said voltage selecting block alternately selects said pair of  $\gamma$ -correction voltages having a positive polarity and said pair of  $\gamma$ -correction voltages having a negative polarity, with respect to said Vcom voltages.
6. (Original) The LCD control unit as defined in claim 1, wherein said voltage generator block includes a resistor string for generating a plurality of voltage levels, a decoder for decoding said voltage address signal, and a selector for selecting one of said  $\gamma$ -voltage levels or one of said Vcom voltage levels.
7. (Original) The LCD control unit as defined in claim 1, wherein said LCD control unit is a one-chip IC.

Claims 8 - 11 (Cancelled)

12. (Currently Amended) A display control unit for driving a display panel in a display device, said display control unit comprising:

- a signal controller for generating a voltage address signal and a polarity control signal;
- a voltage generator block, coupled to said signal controller, for internally generating a plurality of (n)  $\gamma$ -voltage levels and a plurality of (m) Vcom-voltage levels, said voltage generator block including a voltage selecting block, wherein output of said voltage generating block is selected by said voltage selecting block from said plurality of (n)  $\gamma$ -voltage levels and said plurality of (m) Vcom-voltage levels according to a value of said voltage address signal input to said voltage generator block;
- an impedance converter block, coupled to said signal controller and coupled to and separate from said voltage generator block, that converts input impedances of the  $\gamma$ -voltage levels and the Vcom-voltage levels provided by said voltage generator block and provides as output a specified number of said  $\gamma$ -correction voltages and said Vcom voltage according to a value of an input polarity signal; and;
- ~~a voltage selecting block coupled to said voltage generator block, wherein an output of said voltage generating block is selected by said voltage selecting block from said plurality of (n)  $\gamma$ -voltage levels and said plurality of (m) Vcom-voltage levels according to a value of said voltage address signal, and wherein said voltage selecting block includes an impedance converter, having at least one operational amplifier to receive said  $\gamma$ -voltage levels and said Vcom-voltage levels, to convert internal impedances of the  $\gamma$ -voltage levels and the Vcom-voltage levels and generate a specified number of  $\gamma$ -correction voltages and one of said Vcom-voltages according to a value of said polarity signal; and~~
- a display driver for generating a set of display data signals based on a set of external data signals, wherein said display driver receives said specified number of said  $\gamma$ -correction voltages output from said impedance converter and includes a  $\gamma$ -correction section for correcting voltages of said display data signals based on said specified number of said  $\gamma$ -correction voltages.

13. (Previously presented) The display control unit as defined in claim 12, wherein said  $\gamma$ -correction section generates a plurality of voltages based on said specified number of said  $\gamma$ -correction voltages, and said voltages of display data signals are selected from said plurality of voltages based on said set of external data signals.